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## Phosphorus, Sulfur, and Silicon and the Related Elements

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### Complexes Of Thiophosphoryl Compounds with AgNO<sub>3</sub>

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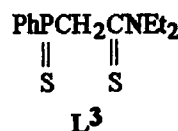
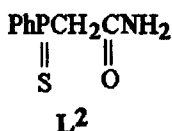
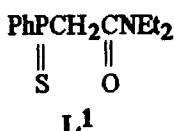
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## COMPLEXES OF THIOPHOSPHORYL COMPOUNDS WITH $\text{AgNO}_3$ .

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Under conditions of interphase catalysis complexing agents  $\text{L}^1$ ,  $\text{L}^2$  and  $\text{L}^3$  have been synthesized<sup>1</sup>. Using spectral and X-ray methods complex formation of these ligands with  $\text{AgNO}_3$  has been studied.



Each ligand forms a complex with  $\text{Ag}^+$  ion by means of two donor centers: S and O atoms (two S atoms in case of  $\text{L}^3$ ). First of all in a solution P=S group of the ligands is coordinated by Ag ion. Crystalline complex  $[\text{AgL}^1\text{NO}_3]_2$  is a center symmetric dimer, in which S atoms are bridging and Ag ion has tetrahedral environment (X-ray data)<sup>2</sup>. Complex  $\text{Ag L}^2\text{NO}_3$  is stabilized by H-bonds. In contradistinction to  $\text{L}^1$  and  $\text{L}^2$  ligand  $\text{L}^3$  forms a soluble complex  $[\text{Ag}(\text{L}^3)_2]\text{NO}_3$ ,  $\lg K=3.9$  (spectrophotometric measuring in  $\text{CH}_3\text{CN}$ ).

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